OUR CLIMATE FUTURE: TE PAE TAWHITI O KIRIKIRIROA

Our strategy to respond to climate change



"Ko te pae tawhiti whaaia kia tata, ko te pae tata whakamaua kia tina."

Seek out the distant horizons, while cherishing the achievements at hand.

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Introduction

Climate change is one of the greatest challenges of our time. Without immediate, bold, and decisive action, we will continue to see the impacts intensify, and the world inherited by future generations will look increasingly different to the one we know today. Fortunately, there is still a window of opportunity for us to act.

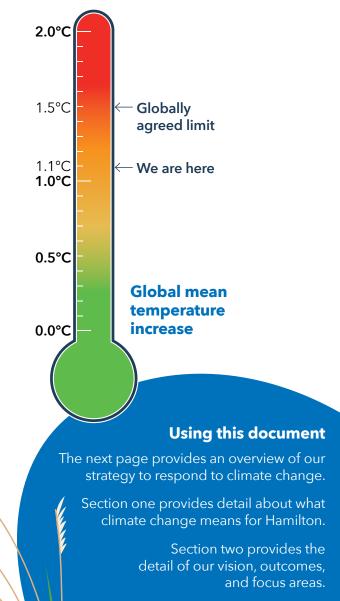
Climate change is more than just an increase in temperature; it includes changes in weather patterns like drought and floods. The things that our community values in Hamilton Kirikiriroa, the awa (river), our gullies and natural spaces, are already being impacted by climate change.

As these changes continue and intensify, they will impact the wellbeing of our community. We need to prepare our community and city to be resilient to these changes.

New Zealand Aotearoa along with most countries around the world have committed to limit global warming to 1.5°C to avoid the worst impacts of climate change. To achieve this, we must act now to reduce emissions at the global, national, and local scale. Here in Hamilton Kirikiriroa this means embracing lowcarbon transport, focusing on sustainable urban intensification, and enabling our community to make low-carbon choices.

Our community has made it clear that they want Council to lead the way in responding to the climate crisis for our city. This Strategy - Our Climate Future: Te Pae Tawhiti o Kirikiriroa - outlines the priorities for our response and will guide the way we consider climate change in all we do. We will continue to work together with our partners and community as we implement this strategy and

deliver our action plans.



Information on the development of Our Climate Future: Te Pae Tawhiti o Kirikiriroa, and updates on the Strategy implementation and other associated work, can be found on the Hamilton City Council website, hamilton.govt.nz.

Our climate future -Our strategy to respond to climate change

Our vision: Hamilton Kirikiriroa is a thriving, low-carbon city that responds and adapts to climate change

He taaone taurikura, waro-hakahaka hoki a Kirikiriroa e urupare nei, e urutau nei hoki ki ngaa panonitanga aa-huarere

Outcome one:

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By acting together, our emissions are reducing

He mahi tahi noo maatou, e mimiti haere ana ngaa paanga parakino

Our focus areas:

- Establish and implement emissions reduction pathways for our city and our organisation's emissions.
- Develop a low-emissions transport network and system.
- Make Hamilton a centre of excellence for climate response innovation.
- Support our businesses and community through the lowcarbon transition and to reduce their emissions.
- Embed circular economy principles in all activities.

Outcome two:

Our neighbourhoods enable lowcarbon living

Maa oo tatou takiwaa noohanga e ora ai te ao warohakahaka

Our focus areas:

- Create a 20-minute city of compact, connected and healthy neighbourhoods, with a focus on sustainable urban intensification.
- Enable low-carbon infrastructure and buildings, and opportunities for renewable energy solutions.
- Support community sharing networks to reduce emissions and enable other co-benefits.



Our city is ready for Hamilton's climate

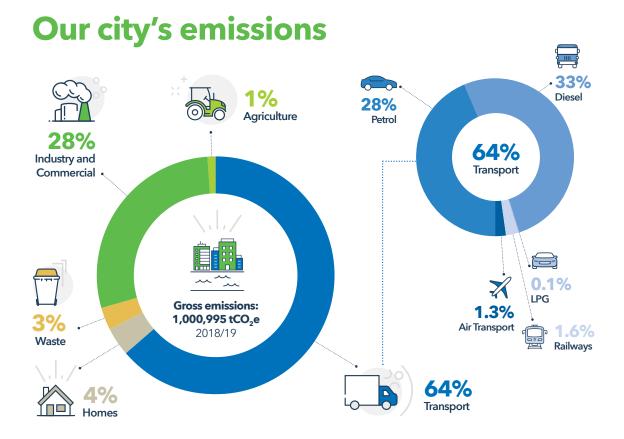
Kei te rite too taatou taaone moo te aahuarangi o Kirikiriroa

Our focus areas:

- Improve our community's resilience and reduce the impact of climate change on their wellbeing.
- Build the right things in the right place to reduce our climate risk exposure.
- Future-proof existing and new infrastructure to be climate resilient.
- Regenerate our natural environment, to improve the resilience of our gullies and other natural areas.
- Encourage sustainable water use and conservation measures to protect the Waikato River.

Section one:

What climate change means for Hamilton Kirikiriroa



In 2018/19, Hamilton's gross (total) emissions were 1,000,995 tonnes of carbon dioxide equivalents (tCO₂e). This includes emissions from the activities of residents, visitors, businesses, and industries. When accounting for emissions removed by carbon sinks such as forestry, our net emissions were 1,000,243tCO₂e. This represents 6tCO₂e per person per year, or approximately 252 car trips from Hamilton to Auckland.¹

Transport accounts for almost two thirds of our city's emissions. These come from trips within the city as well as from people coming into Hamilton Kirikiriroa for work, play and business. Reducing these emissions means changing how people move in and out of, and around our city to get to work or school every day; and at a city and regional scale, it means a transformation of our transport network and system.

As an urban area, we have little forestry in Hamilton Kirikiriroa. So, using plants and trees to capture and store (sequester) our emissions is a challenge compared to other parts of the country.

Our city is growing quickly, adding more pressure on the need to reduce emissions. We can show leadership by approaching this growth in a climate-conscious way and use it as an opportunity to support our community to live low-carbon lifestyles.

¹ This is an approximation, calculated using Toitu travel calculator.

Hamilton Kirikiriroa is well-placed to respond to climate change. We are an innovative city, with a young and diverse population and passionate community groups. By acting now, we can maximise the opportunities for our people and environment as the country transitions to a low-carbon future.

Changes in our climate

The climate in our city is already changing, including longer summers, warmer temperatures, extreme rainfall, and drought. Climate modelling shows that for Hamilton Kirikiriroa, over the next few decades we'll experience:













increase in total rainfall

rising temperatures

increase in extreme rainfall events

longer hot summer season

increase in the number of hot nights



the number of hot days.

At a high level, these may just seem like changes in weather. However, these changes will affect our community, as the weather and climate influence our lives in many ways.



Climate change and our community's wellbeing

Changes in our climate are already starting to impact some aspects of our community's wellbeing, and as it worsens, there will be more widespread changes.

In contrast, with good planning there are opportunities in the transition that will benefit for our community.

Our everyday lives

Without appropriate action, the impact of climate change will be increasingly felt in our daily lives, e.g.:

- The availability and cost of food may be affected as farming and supply chains are disrupted.
- Bills for heating and cooling our homes are likely to increase.
- The cost of home and contents insurance is likely to increase, as more areas become hazardous.
- Our community may begin to feel the health impacts of climate change, including from heat exposure, spread of viruses and the stress and anxiety caused by uncertainty.

Reducing emissions can also lead to positive changes in our daily lives, e.g. more walking and biking can be good for health.

What does wellbeing mean?

As per the Local Government Act 2002, the purpose of local government is to promote the social, economic, environmental and cultural wellbeing of communities in the present and in the future. Hamilton City Council describe wellbeing as:



Paapori (Social) -We care for, and about, all our people. E manaaki ana taatou i

oo taatou iwi.

Taiao (Environmental) -We love and protect our environment.

E kaingaakau ana, e tautiaki ana taatou i too taatou taiao. **Ohaoha (Economic)** -Our economy provides opportunities to prosper.

Maa taa taatou oohanga ngaa whai waahitanga e taurikura ai te tangata.

Ahurea (Cultural) -We celebrate our unique and diverse culture.

E whakanui ana taatou i too taatou ahurea ahurei, kanorau hoki.



Increased inequality

Climate change and the low-carbon transition are likely to be felt more by some groups of our community than others, such as people with disabilities, and the elderly.

While some costs will go up for many, those already struggling will likely be most impacted. e.g. some people may be:

- unable to afford upfront cost of energy efficient heating/cooling which results in higher ongoing costs
- unable to afford an electric car so left paying high costs for petrol.

Our rangatahi (young people) will also be more impacted, as they have to live with the long-term consequences of climate change.

Impacts and their significance to Maaori

There are several risks that have been identified as significant to Maaori, including:

- loss of land, biodiversity, and food sources
- loss of cultural sites such as marae
- impact on historical sites along the awa
- impacts on tikanga (cultural practices, traditions) that have been passed down through generations.

Changes to our economy

The economy will change as we transition to a low-carbon city. There will likely be changes in the types of jobs available and the industries operating in Hamilton. Multiple industries are likely to be impacted by the transition, e.g.:

- Mechanics electric vehicles require less maintenance than petrol and diesel cars.
- Farming changes in on farm practices to reduce emissions.
- Small businesses impacted by changes to costs in their supply chains.

There will be new jobs and industries created through the transition that could be an

opportunity for our community. This includes opportunities for circular economy industries that keep waste out of landfill and new lowcarbon technologies.

Our infrastructure

Infrastructure that keeps our city running may become more vulnerable to the extreme weather. This could impact key services like roads, water supply and community facilities, and lead to increased costs. Our stormwater network will be subject to increasing intensity in rainfall that we are already starting to experience.

New infrastructure will need to be designed and built to withstand the anticipated changes in weather, costing more to build.

The Waikato River

Our most important taonga (treasure), the Waikato River, is put at risk by the changing climate.

- Higher temperatures may disrupt the natural ecosystem and increase demand for drinking water, causing the health of the awa to deteriorate.
- A reduction in the quality of the awa will impact drinking water availability for households and industry, as well as opportunities for recreation and respite from the heat.

Our natural areas and biodiversity

Hamilton's parks and natural areas, including our gullies, are also affected by changes to our climate.

- Changes in temperature and rainfall could enable new and existing pest species to thrive, threatening our plants and wildlife and requiring increased maintenance.
- The ability to use our city's natural spaces in extreme weather may be limited, with reduced opportunities to play, exercise, and interact with nature.

To protect ourselves and our environment from these impacts we need a step change in our climate response. This Strategy and our emissions targets are our commitment to taking strong action.

Section two: Our Strategy

Climate change impacts all of us and threatens the wellbeing of our community and environment. We must act now to reduce our emissions, prepare for current and future impacts, and respond to the effects we are already experiencing. This Strategy guides our response as we transition towards our vision for Hamilton Kirikiriroa as a lowcarbon and resilient city.

Hamilton Kirikiriroa is a thriving, low-carbon city that responds and adapts to climate change.



Our role

The role Hamilton City Council will play in delivering the vision.

Hamilton City Council leads by example and advocates for the community in preparing for and responding to climate change.

Council has an important role in responding to climate change. We can directly and indirectly impact emissions in the city, and we are on the frontline in preparing our community for changes in the climate.

Council can have a direct impact on emissions and our climate preparedness through:

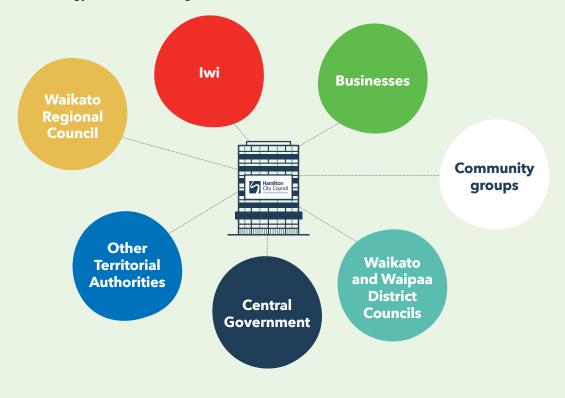
- regulatory tools like the District Plan and resource consents
- provision of infrastructure like roads, cycleways and footpaths
- provision of services like rubbish and recycling
- purchasing of goods and services
- addressing our own emissions.

Indirectly we can have an impact on emissions and adaptation by:

- partnering with other councils, businesses, and organisations, e.g. on joint emissions reduction or sequestration projects
- influencing decisions, e.g. through joint committees
- advocating to those who have responsibility to act, e.g. submissions to central government
- empowering and educating our community, businesses, and industry to be part of Hamilton's climate change response.

Who we will work with

Everybody has a role in responding to climate change. To achieve the vision and outcomes of this Strategy we will work together with:



Guiding principles

These principles guide our actions and decision-making and have influenced the development of the Strategy. We will continue to be guided by them as we develop action plans.

Equitable and holistic Kia torowhaanui, kia taurite

We take a holistic wellbeing approach to climate change, focusing on actions that are equitable for our community.

Working together Te mahi ngaatahi

Collective action is essential to our climate response. We must collaborate with iwi, hapuu, residents, community organisations, businesses, central and local government, and other key partners.



Te ao Maaori is a frame of reference for our action, to ensure that our decisions acknowledge the interconnectedness and interrelationship of all living and non-living things.

Bold and informed Kia whai kaha, kia maarama!

Our climate response is bold and based on research and evidence. This includes maatauranga Maaori (Maaori knowledge), the valuable insight that has been continually tested and updated over time.

Taking the right action

Te tika o te mahi We follow best practice in our climate response and are transparent and accountable for our actions.

Future-focused

Te aronga anamata We are taking action now to create a sustainable city that benefits generations to come as well as our current community.

An equitable transition

For our city to thrive in the future, we need everyone to be ready for both the physical impacts of climate change and the transition to low-carbon living. To do this, we must ensure that everyone is included in a fair and equitable transition.

The actions we take to respond to climate change will consider how we support both those who have limited ability to act, as well as those who don't want to take action on climate change.

We will tailor our response to our different communities in Hamilton Kirikiriroa, recognising the cultural, economic, and social differences within these communities.

Understanding existing inequalities and the barriers for our community to participate in the transition to a low-carbon future, will enable us to develop an inclusive response that ensures no one is left behind as our city changes. This includes working in partnership with iwi and hapuu and involving them at all levels; protecting Maaori concepts, values, and practices; and providing equitable support and opportunities for Maaori to prosper.

As the transition to a low-carbon economy accelerates, some businesses and industries will be affected. Through our climate change response, we will identify ways to support and advocate for new learning opportunities, skills, and employment for our community, to ensure those impacted have access to the tools and information they need.



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Te ao Maaori and climate action

Te ao Maaori teaches us that all life is connected, and there is an intimate relationship between people and their environment. Upon arriving in New Zealand Aotearoa, Maaori gained maatauranga (knowledge, wisdom) of the natural environment based on experiences, research, and encounters with new land, weather patterns, flora and fauna. Guided by this and tikanga, passed down through whakapapa (genealogy) and narratives retold by ancestors, Maaori were able to learn and maintain the mauri (life force) of their natural environment.

Kaitiakitanga, meaning guardianship, protection, stewardship, is a way of thinking, acting, and behaving in Maaori culture. It has been practiced by Maaori for centuries, e.g. by setting temporary raahui (a ban, conservation measure) on certain areas, or by using the lunar calendar to guide planting, harvesting, hunting, and fishing, so that resources are gathered sustainably.

Using te ao Maaori as a frame of reference is crucial for our climate change response and provides a deeper insight into the links between our social, cultural, environmental, and economic wellbeing. Embedding te ao Maaori in our climate change response aligns with Council's He Pou Manawa Ora - Pillars of Wellbeing Strategy. He Pou Manawa Ora outlines our vision for a city that celebrates its whole history, including its unique Maaori heritage. The strategy recognises Maaori as key partners in determining Hamilton's future and aims to achieve better outcomes for Maaori and all Hamiltonians. The four pillars or 'pou' are history, unity, prosperity and restoration.

We all have a duty as kaitiaki (guardians, stewards) to be part of the response to climate change. At a local level, our response to climate change can restore and enhance our city and river, and reinstate the natural beauty observed by Kiingi Taawhiao in his maimai aroha (lament, show of affection):

Hoki ake nei au ki tooku awa koiora me ngoona pikonga He kura tangihia o te maataamuri. E whakawhiti atu ai i te koopuu maania o Kirikiriroa, Me ngoona maara kai, te ngawhaa whakatupu ake o te whenua moomona The river of life, each curve more beautiful than the last.

Across the smooth belly of Kirikiriroa, its gardens bursting with the fullness of good things.

Our emissions targets

We are setting these targets but acknowledge that everyone has a role to play in achieving them - Council, central government, our regional partners, businesses, and community will all need to act together.

To find out more about how we got to these targets, visit our website.

City-wide



Turning point -Emissions peak at the very latest

Based on latest science and advice from the Intergovernmental Panel on Climate Change (IPCC), global emissions must peak by 2025 at the latest.



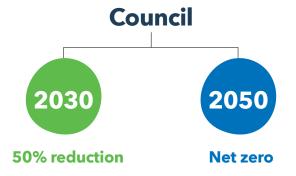
Minimum 30% reduction

We have put a Hamilton 'lens' over national modelling and believe that we can achieve this target. It will mean pushing ourselves to do more in our climate change response.



Minimum 82% reduction

We have put a Hamilton 'lens' over the national modelling and this target reflects our share of the national target of net zero by 2050.

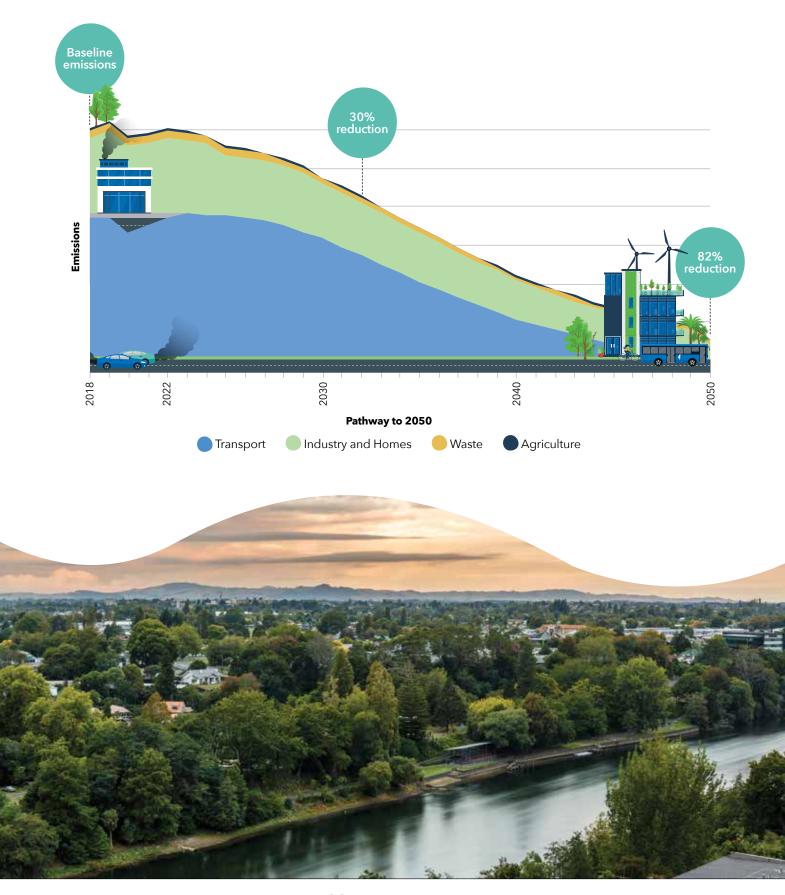


We need to show leadership as a Council, to bring the community and our partners along our emissions reduction journey.

Note - the baseline for our targets is 2018/2019

We don't know exactly what our emissions reduction pathway to 2050 will look like - breakthroughs in technology and the uptake of low-carbon behaviours can only be modelled based on what we currently know.

The latest modelling shows that our pathway will most likely follow this trend.



Our three outcomes



Outcome one:

By acting together, our emissions are reducing

He mahi tahi noo maatou, e mimiti haere ana ngaa paanga parakino



Outcome two: Our neighbourhoods enable low-carbon living

Maa oo tatou takiwaa noohanga e ora ai te ao waro-hakahaka



Our city is ready for Hamilton's climate

Kei te rite too taatou taaone moo te aahuarangi o Kirikiriroa

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Outcome one: By acting together, our emissions are reducing

Reducing our emissions requires collective action - by working together with our community, businesses, and partners we can make this happen.

There are many within our community who have started to reduce emissions. We need to build on this and get everyone taking action to increase the rate of reduction. We will regularly review our progress towards our targets and provide updates on how we are tracking.

At Council we have started to reduce our operational emissions by improving our energy efficiency, changing fuel sources, and travelling less. We will continue to find new ways to reduce our emissions.

Reducing emissions from transport is a priority. We need to shift from the cardominant city we are today, to a city that embraces low-emissions travel options such as walking, biking, and public transport. Through our partnerships, we also need to support the use of zero and low-carbon fuels for freight.

Emissions from industry and commercial activities are the second largest portion of our city's emissions. As an innovative city we can be transformational in our response, as we support existing industries to transition and attract new low-carbon industries to our city.

We will focus on shifting to a circular economy, which eliminates waste and keeps resources in use for as long as possible. It's designed to replace our current 'take-make-dispose' system with a 'make-use-return' system.



Our focus areas:

- Establish and implement emissions reduction pathways for our city and own organisation's emissions.
 - » We will map out the actions we need to take to achieve our targets in partnership with our community and businesses.
- Develop a low-emissions transport network and system.
 - » In partnership with others, we will create a transport network and system that supports easily accessible and safe walking, biking, micro-mobility and public transport, including electric buses. We will support electric and zero-emissions vehicles for those trips that require a car, and trains for moving goods in and out of Hamilton as well as connecting us to other cities and towns like Auckland and Cambridge.

• Make Hamilton a centre of excellence for climate response innovation.

- » Together with our partners, we will identify new opportunities for developing creative and technical solutions.
- Support our businesses and community through the low-carbon transition and to reduce their emissions.
 - » We will work with our community and businesses to understand and plan for the impacts of the transition.
 - » We will provide tailored education and tools on low-carbon actions.
 - » We will work with our Climate Accord members, a group made up of local businesses and organisations, to deliver and champion emissions reduction actions across the city.

• Embed circular economy principles in all activities.

- » We will partner with businesses to identify opportunities for new circular industries in Hamilton Kirikiriroa.
- » We will educate our community and our own organisation on making decisions that minimise waste, and incorporate circular economy principles in our purchasing decisions.

How we'll know we are successful:

- We are progressing towards our emissions targets.
- Emissions from transport are decreasing.
- There is an increase in the community's awareness of our climate change response.
- The number of businesses acting on climate change is increasing.
- The quantity of material entering the waste stream is decreasing.

Outcome two: Our neighbourhoods enable low-carbon living

To reduce our emissions, we need to make it easy for our residents to access, live and contribute to a low-carbon lifestyle.

As a rapidly growing city, this is a challenge. Our city planning needs to prioritise sustainable urban intensification within Hamilton's existing built environment to realise the low-carbon benefits that this can bring.

We aspire to be a 20-minute city of compact, connected, and healthy neighbourhoods.

For Hamilton Kirikiriroa, this means that people can live locally by meeting most of their daily needs walking from their home, in pleasant surroundings, and with safe, easy access to other parts of the city by biking, using micro-mobility, or public transport. Ideally our neighbourhoods should include:

- a small supermarket, butcher, grocer, bakery and café
- opportunities for play and open green spaces
- early childhood facilities and primary schools
- health services such as doctors, dentists, and chemists
- facilities for biking and public transport.

Access to other things outside of our neighbourhoods, such as libraries, swimming pools, major shopping centres, the Zoo, and workplaces, would be easy to access by walking, biking or using public transport.



Our homes, shops and workplaces need to be built

with emissions in mind. All new buildings need to be efficient to heat and cool and incorporate sustainable design principles. They should also consider emissions reductions during the design and construction phases. Standards set by central government need to drive better design in new builds as well as in existing homes and businesses. These buildings need to be upgraded to reduce the energy needed to heat and cool them.

Neighbourhoods should provide access to sharing economies so that everyone can participate in lowcarbon living - not only those who can afford it.

A sharing economy means communities share access to goods and services, e.g.:

- toy, tool and other resource libraries
- electric car and bike share services.

Our focus areas:

- Create a 20-minute city of compact, connected and healthy neighbourhoods, with a focus on sustainable urban intensification.
 - » We will do this through our urban and transport planning and implementation of the Hamilton Urban Growth Strategy, Access Hamilton, Metro Spatial Plan and District Plan.
- Enable low-carbon infrastructure and buildings, and opportunities for renewable energy solutions.
 - » We will use our planning and regulatory tools to drive better design and we will also advocate for changes in the Building Code and other legislative tools.
 - » We will make sure our own buildings are operating as low emission and as efficiently as possible.
- Support community sharing networks to reduce emissions and enable other co-benefits.
 - » We will use our services and facilities to support new and existing sharing networks.

How we'll know we are successful:

- More people are using active transport options (e.g. walking, biking, scooting) within their neighbourhoods.
- There is an increase in the use of public transport.
- More of our homes and buildings are incorporating sustainable design principles.
- Our communities are actively making lowcarbon choices as they recognise the benefits of doing so.

Outcome three: Our city is ready for Hamilton's climate

We are already experiencing some of the effects of climate change and these will only intensify. We need to improve the ability of our community and natural and built environments to deal with these changes.

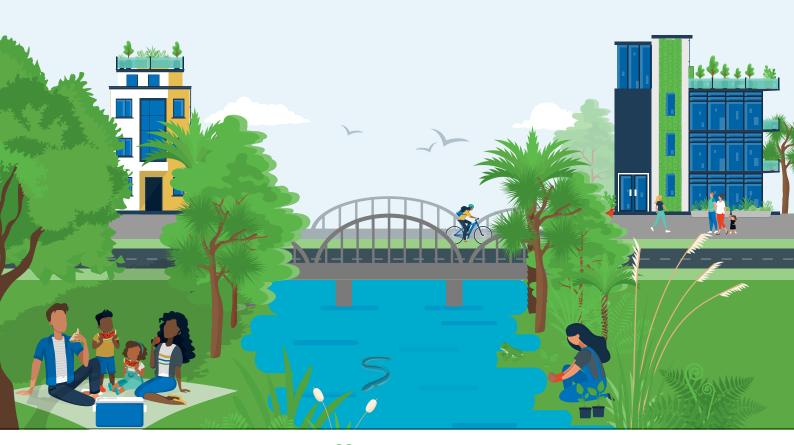
Understanding our climate risks and having upto-date information will be critical to our success. It will enable us to design the appropriate solutions to address potential impacts on our community's wellbeing.

Our understanding of the physical risks will guide our planning decisions and mean that we build the right things in the right place. e.g. we will need to consider the latest climate predictions to understand and protect against flooding events and to better manage stormwater runoff.

Existing and new infrastructure such as pipes, roads, and drainage systems need to be future-proofed, so that they can deal with impacts like extreme rainfall events and increased temperatures, while continuing to provide essential services. In understanding the risks, we will be more ready to respond when a hazard event does occur and we need to act quickly.

Nature has a key role to play in our adaptation response. In making our infrastructure more resilient we can incorporate nature-based solutions such as green roofs, natural waterways, and trees - which help reduce urban heat intensification, reduce run off into our stormwater network and sequester carbon.

We must restore and protect our natural areas, especially those most vulnerable to climate change - including the Waikato River and our gullies - while also incorporating more natural spaces into our city. We need to protect our awa and its ecosystem by encouraging better management of stormwater runoff and more sustainable water use by households, businesses and Council.



We are committed to restoring and enhancing the environment, and particularly the Waikato River, in line with Te Ture Whaimana o Te Awa o Waikato (Vision and Strategy for the Waikato River), Tai Tumu, Tai Pari, Tai Ao (Waikato-Tainui Environmental Plan 2050) and Te Rautaki Taamata Ao Turoa o Hauaa: Ngaati Hauaa Environmental Management Plan. These commitments will be a vital part of our climate change response and we will work in partnership with our community and iwi partners to achieve them.

Our focus areas:

- Improve our community's resilience and reduce the impact of climate change on their wellbeing.
 - » We will complete climate change risk assessments for our city and develop appropriate adaptation responses.
- Build the right things in the right place to reduce our climate risk exposure.
 - » We will regularly complete climate modelling for our city and integrate it with existing data. We will use it to inform our planning for the city.
- Future-proof existing and new infrastructure to be climate resilient.
 - » We will embed climate change considerations into our infrastructure and asset management planning.
- Regenerate our natural environment, to improve the resilience of our gullies and other natural areas.
 - » We will invest in our natural environment through the delivery of the Nature in the City Strategy and work with our community to protect trees and natural areas across Hamilton.
- Encourage sustainable water use and conservation measures to protect the Waikato River.
 - » We will lead by example, reducing water use in our parks, green spaces, community facilities and event venues.

How we'll know we are successful:

- Our roads and cycleways are meeting our community's needs despite the changes in climate and extreme weather events.
- Native vegetation cover has increased to 10% by 2050 in line with our Nature in the City Strategy.
- Tree canopy cover is increasing across the city.
- Our stormwater system continues to minimise the impact on the awa despite changes in rainfall.
- Water is being conserved by our community, businesses, and at Council facilities.
- Our community is more aware of the impacts of climate change in Hamilton Kirikiriroa.





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